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**KEY LOGISTICS ISSUES FROM KOSOVO,  
CAN THE UNITED STATES ACHIEVE STRATEGIC VELOCITY**

BY

LIEUTENANT COLONEL KEVIN LEONARD  
United States Army

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USAWC STRATEGY RESEARCH PROJECT

**Key Logistics Issues from Kosovo,  
Can the United States Achieve Strategic Velocity?  
By**

**Lieutenant Colonel Kevin Leonard  
United States Army**

**Colonel Joseph R. Cerami  
Project Advisor**

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**U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013**

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## ABSTRACT

AUTHOR: LTC Kevin Leonard

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This case study of the recent intervention in Kosovo by the United States and NATO, defines strategic velocity, and offers strategic planners a formula for its use. Planners should focus on the three logistics lessons in the paper: 1. The need for strategic lift. 2. The requirements for aerial refuel assets. 3. The limitation port throughput capacity imposes on deploying forces.

The U.S. Army deployment to Albania in April 1999 was chaotic--as combatant commanders insisted on a rapid deployment by air. In a perfect example of the friction associated with any deployment, U.S. forces ordered to Kosovo could not obtain permission to use the preplanned deployment destination of Macedonia. Forced to switch to an unplanned deployment to Albania, they found the only useable airfield at Tirana was grossly underdeveloped--allowing only one transport aircraft on the ground at a time. In the aftermath of Kosovo, problems with aerial refueling, availability of strategic lift, throughput capacity, and deploying U.S. Army Apache helicopters in a timely fashion have reverberated throughout the Department of Defense.

This study suggests a new look at the entire deployment process, and emphasis on the overarching concept of strategic velocity. Strategic Velocity is the ability of a force to project itself from the homeland or other strategic points to arrive at an operational theater ready to fight and sustain itself--it is more than the speed of movement from point A to B. Instead, for the power projection of military forces, strategic velocity is a function of forces required, distance, strategic lift, aerial refuel capability, and port throughput capacity. The result of combining these seemingly disparate components under one concept is a synergy that will improve force projection planning and execution.

Strategic Velocity is innovative--it is not covered in U.S. joint doctrine, tactics, techniques, or procedures. Strategic Velocity is important--because it offers planners a comprehensive tool for end-to-end deployment planning, thus meeting the demands of force projection with greater timeliness and accuracy. With strategic velocity as its centerpiece, this study concludes with suggestions for improvements in material fielding, force projection, and strategic planning.



## TABLE OF CONTENTS

ABSTRACT .....	iii
PREFACE.....	vii
LIST OF ILLUSTRATIONS.....	ix
KEY LOGISTICS ISSUES FROM KOSOVO--CAN THE UNITED STATES ACHIEVE STRATEGIC VELOCITY?.....	1
PRE-DEPLOYMENT BACKGROUND--THE ROAD TO WAR.....	2
DEPLOYMENT PART I--GETTING THERE .....	3
DEPLOYMENT PART II-- WHAT TOOK YOU SO LONG? .....	5
AERIAL REFUEL AND STRATEGIC LIFT--THE CHALLENGE .....	5
THROUGHPUT CAPACITY--A TOUGH TIME IN TIRANA.....	7
CONCLUSIONS .....	8
LESSONS AND RECOMMENDATIONS: WHAT CAN BE DONE? .....	9
GLOSSARY.....	13
ENDNOTES.....	15
BIBLIOGRAPHY .....	19



## PREFACE

In June 1999, the U.S. and NATO concluded a 78-day air campaign to stop ethnic cleansing in Kosovo. As a result of an intensive operation focused on Serbian forces and infrastructure, Serbian armored forces withdrew to their homeland. A number of journalists and military professionals proclaimed Kosovo a great victory. The problem with victory is that the winner seldom pays attention to the lessons the conflict might offer.

As a professional soldier and a logistician, I contend that our strategic logistics capability as defined in this paper allowed us to succeed in Kosovo--where other nations might have failed. I also submit that if we do not study our successes as well as our failures we are doomed to some level of military misfortune. The three failures: to learn, to anticipate, and to adapt seem to lie in ambush just around the corner for U.S. forces--particularly the Army in the 21<sup>st</sup> century. If the United States is to avoid future failures, we cannot ignore the lessons of Kosovo. As a nation with a strategy of force projection, we must break our pattern of Cold War thinking and address the variables of strategic velocity: forces required, distance, strategic lift, aerial refueling, and throughput capacity.

My heartfelt gratitude extends to my wife Pamela and children Kris, Jessica, and Melissa who have tolerated my insatiable curiosity of all things military. Additionally, LTC Jim Embrey, Col Joe Cerami (project advisor), Col Ed Buffington of EUCOM, LTC Jeff Lamoe (friend and editor), Col Mike Matheny, Col (ret) Len Fullenkamp, Professor "Wick" Murray and MG Robert Scales for their attempts at educating this "slow but trainable" mind. Finally, to all the men and women who fought the Kosovo campaign and continue to serve in Bosnia and Kosovo--the "common" soldiers, sailors, airmen, and marines performing extraordinary feats in uncommon circumstances, God Bless you all.



## LIST OF ILLUSTRATIONS

FIGURE 1 GENERAL CONDITIONS AT TIRANA, APRIL 1999.....	7
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## KEY LOGISTICS ISSUES FROM KOSOVO--CAN THE UNITED STATES ACHIEVE STRATEGIC VELOCITY?

The more I see of war, the more I realize how it all depends on administration and transportation...It takes little skill or imagination to see where you would like your Army to be and when; it takes much knowledge and hard work to know where you can place your forces and whether you can maintain them there.

--General A.C.P. Wavell<sup>1</sup>

On 8 April 1999, LTC Jim Embrey sat inside the C-17 with a platoon of infantrymen from his Task Force (TF) 1-6 Infantry wondering, "How did we come to this?" Just a few days prior he had listened to a presidential news conference by White House spokesman Ken Bacon--which seemed to indicate that things were not going as planned with the air campaign in Kosovo. Bacon stated that ground forces might be required to "stabilize the situation," although just four days earlier the President pledged not to send ground troops to Kosovo. Jim called his brigade commander and asked--"Should I take this press conference as a warning order for deployment to Albania/Kosovo?" The brigade commander said he would "ask the question." Later that same day, TF 1-6 Infantry received its alert order for movement to Tirana, Albania.<sup>2</sup>

As the sun rose on 9 April 1999, Jim found himself in Tirana as the first U.S. maneuver force commander on the ground. Jim's mission was to secure the airfield and a potential site for sheltering Apache aircraft.<sup>3</sup> The situation was chaotic at best. "It is total chaos, no one wants to give up full control of their troops to NATO. All the contingents are competing to buy things, to rent buildings and employ people. The prices are going up and up, we are wasting a lot of money."<sup>4</sup> While NATO had ostensibly appointed a commander on the ground at Tirana, it was clear that each nation was looking out for its own best interests. The absence of an effective combined command created tremendous problems in generating combat power and sustainment for the humanitarian relief effort of the Kosovo refugees. Beyond the issue of command and control, Jim was to secure a region known as the poorest of the poor and a decrepit airport with a maximum on the ground (MOG) of one aircraft at a time. With a shake of his head Jim decided to "move out and draw fire"--in other words, get on with the mission--even if he could not define it.

Jim's experience was typical--throughout Operation Allied Force (the NATO name for the Kosovo Campaign), U.S. forces had to overcome many limitations in logistics, movement, and transportation infrastructure. Poor runway and apron conditions at Tirana airport slowed aircraft turnaround times, limited throughput, and delayed the onward movement of forces and humanitarian supplies. Competition for lift resources became so intense that aircraft were managed at the highest levels of NATO. Interestingly, troop deployments were finally expedited when NATO nations began to airlift refugees out of Albania--the return trips were used to deliver troops and equipment. In the end, despite its problems in deployment, the alliance achieved its goals in Kosovo by avoiding the use of land combat forces.

"We accomplished this by prosecuting the most precise and lowest-collateral-damage air campaign in history--with no U.S. or allied combat casualties in 78 days of around-the-clock operations and over 38,000 combat sorties."<sup>5</sup>

The success of NATO in Kosovo can serve as a wake up call or an invitation to disaster. The military authors/analysts Eliot Cohen and John Gooch in their work Military Misfortunes, The Anatomy of Failure in War, outline three basic kinds of failure—to learn, to anticipate, and to adapt. "The failure to absorb readily accessible lessons from recent history is in many ways the most puzzling of all military misfortunes."<sup>6</sup> That the armed forces of the United States have often failed to learn from their experiences is evident in our usual performance in the first battles of a conflict.<sup>7</sup> Failure to anticipate is—"The inability to foresee and take appropriate measures to deal with an enemy's move, or a likely response to one's own."<sup>8</sup> Once deployed to Tirana, the unwillingness of U.S. Army leaders to revise their supply requirements and their continued insistence on deployment via air--points to a failure to adapt. "Where learning failures have their roots in the past, and anticipatory failures look to the future, adaptive failures suggest an inability to handle the changing present."<sup>9</sup> The goal of successful crisis intervention and power projection is to avoid the failures outlined by Cohen and Gooch. If that is true, where do we go from here? What are the important lessons from Kosovo that may affect future U.S. operations? How do we avoid future failures? In response to the problems Kosovo introduced, this study focuses on the concept of strategic velocity by examining the pre-deployment background of the crisis, reviewing difficulties in the deployment of American forces to Tirana, use of aerial refueling, and problems in port throughput capacity. Finally, a glossary is included to provide the reader with an understanding of the terms logistics, strategic logistics, and strategic velocity.

## PRE-DEPLOYMENT BACKGROUND--THE ROAD TO WAR

"Limited wars are as old as the history of mankind, as ubiquitous as armed conflict. In the history of international conflict the wars that have been truly momentous and rare are those that were fought to annihilate, to completely defeat or completely dominate the adversary."

Robert Osgood <sup>10</sup>

At the ministerial meeting of the North Atlantic Council (NAC) on 28 May 1998, NATO expressed its concern at the situation in Kosovo and condemned the continuing use of violence. Unfortunately, NATO's initial efforts at brokering peace failed miserably and violence in Kosovo continued unabated. On 15 January 1999, forty-five ethnic Albanians were murdered outside the village of Racak, apparently by Serbian security forces in retaliation for the murder of four Serbian police officers. The massacre increased pressure on the international community to intervene and end the conflict. The contact group (United States, Britain, France, Germany, Italy, and Russia) quickly organized a peace conference in Rambouillet, France.<sup>11</sup>

Initially, neither side in the Kosovo conflict accepted the Western-sponsored Rambouillet peace plan, but after a two-week adjournment, the ethnic Albanian delegation signed the accords. The Serbs remained defiant and refused to accept the proposed settlement. NATO efforts at diplomacy and deterrence failed, resulting in the expulsion of more than one million refugees to neighboring Albania and the alleged genocide of tens of thousands. Consequently, on 24 March 1999, NATO carried out air strikes against the former Yugoslavia (FRY), launching Operation Allied Force.<sup>12</sup> In response, Serbian forces intensified their brutal ethnic-cleansing program against the Kosovar Albanians. As in Bosnia, Serbian leader Slobodan Milosevic essentially thumbed his nose at NATO and prosecuted a war of ethnic cleansing. Displaying Hitler-like qualities, Milosevic carried out his reign of terror in a province that earlier was considered an integral part of Yugoslavia--complete with a functioning, multi-ethnic government.

In an attempt to learn from four years of peacekeeping experience in Bosnia, NATO determined that military forces alone could not stop Milosevic's attack on Kosovar civilians, which was planned and now being carried out. Instead, NATO decided to attack Milosevic's ability to wage future combat operations against either Kosovo or Serbia's neighbors. The political and military objectives outlined for Kosovo were:

**Political**—Establish a peaceful, multi-ethnic and democratic Kosovo where all its people can live in security and enjoy universal human rights and freedoms on an equal basis.

**Military**—

- To deter an even bloodier offensive against innocent civilians in Kosovo.
- To reduce the Serbian military's capacity to harm the people of Kosovo.
- To demonstrate the seriousness of NATO's purpose so that the Serbian leaders understand the imperative of reversing course.<sup>13</sup>

Before NATO could care for refugees or fight over Kosovo, the U.S. and other allies had to plan for forces to deploy to a theater, execute the deployment, and sustainment of those forces. In the end, those deployment plans that were developed had to be discarded as destinations, distance, and forces required changed at the last minute in response to political considerations. Under the watchful eye of the Cable News Network and a host of other media, NATO took its first steps at power projection and promptly experienced its first failure.

## DEPLOYMENT PART I--GETTING THERE

Time is a particularly critical factor on a battlefield dominated by firepower...Our difficulties with projecting forces to Korea, Iraq, Kosovo and elsewhere tell us that quick victories are hard to achieve when an intervening power like the United States is an ocean away...

Major General Robert Scales<sup>14</sup>

The Department of Defense has established plans for moving forces to major theater wars in both Southwest and Northeast Asia. It did not have plans for Operation Allied Force in Southern Europe.<sup>15</sup> The rapidly evolving requirements of Allied Force (deploying combat power versus humanitarian assistance)

strained even the U.S. ability to develop plans that used its lift assets efficiently. Initially, the U.S. plan was to deploy approximately 2,500 soldiers nested in the Allied Command Europe Rapid Reaction Corps (ARRC) to Macedonia, but planners were caught flatfooted when Macedonia denied them permission. The infrastructure (throughput capacity) at Tirana versus Macedonia was poor--in fact far worse than Mogadishu, Somalia--considered as one of the least desirable places on earth.<sup>16</sup> In the end, the change of deployment from Macedonia to Albania effected all parts of the strategic velocity equation--forces required increased, distance increased, requirements for strategic lift and aerial refuel nearly doubled, and throughput capacity decreased.

Following Macedonia's denial, the decision to go to Tirana became the default position of American planners. Unfortunately, no one took the time to consider the issues of strategic velocity--if they had, other options may have developed. When the speed of initial deployments into Tirana did not meet expectations, the absence of strategic velocity as a planning tool became manifest as a failure to anticipate requirements and adapt to a changing situation.<sup>17</sup> Further, U.S. heavy force commanders seeking the fastest way to move insisted on deployment by air--a mistaken notion that directly contributed to our failure to achieve strategic velocity. Other viable options were available for deployment to Albania that may have avoided such failure--including deployment by sea.

The United States Transportation Command (TRANSCOM) has repeatedly stated that it intends to deploy heavy Army forces into a theater using sealift--not airlift. The U.S. currently has a fleet of twelve Medium Speed Roll-on Roll off ships for just that purpose and will have seven more by the year 2003. Ironically, use of sealift would have proven quicker than the wait for airlift. TRANSCOM estimates indicated it could have moved the forces required for Kosovo from Germany to Albania within 14 days--instead of the 21+ that the exclusive use of airlift required.<sup>18</sup> The problems encountered at the APOD in Tirana could be avoided as equipment moved by sea and troops by air. Changing the deployment plan from Macedonia to Kosovo condensed the time available for commanders to plan and rehearse assigned missions. Pressed for time and concerned with issues like force protection in Albania, Jim Embrey and his fellow commanders wanted their "stuff" immediately and were unwilling to wait the perceived extra time it would take to deploy by sea.<sup>19</sup> The implications from Tirana are plain--deployment timelines and plans must come to grips with reality, and commanders must curb their appetite to deploy heavy assets and material by air. America's investment in a new RORO fleet virtually ensures responses to future contingencies will use more sealift.

The central problem with relying on airlift is that there will never be enough. Kosovo clearly underscores the need for additional aircraft for both the strategic and intra-theater missions. Consequently, the U.S. Air Force increased its planned C-17 procurement from 120 to 134 with additional increases possible. However, the C-17 fleet simply replaces the aging C-141 fleet, which will, for the most part, be phased out by 2003. The Air Force plans to upgrade the C-5 (for outsize and heavy cargo) so it can remain in service until 2020. For intra-theater lift requirements, the Air Force plans to upgrade and retain the C-130 fleet as well.

The Kosovo campaign and its high demand for aircraft clearly shows that lift is at a premium whether it is strategic or tactical. The ability to rapidly project forces whether by air or sea is at the cornerstone of a power projection strategy. In Kosovo, our plans for a smooth deployment hit a number of snags, not the least of which was a change in locations. Another deployment event that drew international attention was the decision to deploy U. S. Army Apache helicopters and their subsequent lengthy deployment time.

#### **DEPLOYMENT PART II-- WHAT TOOK YOU SO LONG?**

A mistake in the original assembly of the armies can hardly be put right again in the whole course of the campaign.

Helmut von Moltke—Chief, Prussian General Staff, 1858<sup>20</sup>

The change in deployment plans from Macedonia to Kosovo lead U.S. planners to request the deployment of two dozen Apache helicopters for force protection and offensive capability.<sup>21</sup> The idea was to make full use of the Apache's stealthy abilities to kill enemy tanks from standoff distances if required. General Clark, the Supreme Allied Commander Europe (SACEUR) received approval to deploy the Apaches and was briefed by United States Army Europe (USAREUR) planners—"The Apaches will be in Albania in 7-10 days."<sup>22</sup> Instead, it took three weeks for the Army to deploy 22 Apache helicopters and 3,000 support personnel (including LTC Embrey's TF 1-6). The difference between ten days and twenty-one days is significant in any type of operation. In the end, the Apaches did not participate in combat operations.<sup>23</sup>

To some NATO allies, the inability to meet U.S. expectations indicated a lack of commitment to prosecute the Kosovo campaign. In many ways the United States became a victim of its own successes--others begin to believe we cannot fail unless we intend to do so. In the case of Kosovo and our deployment to Albania, the preponderance of evidence indicates an unwillingness to recognize the limitations of Albania's poorly developed infrastructure and its impact on the deployment plan. "There are only so many planes, so many boats you can bring into Albania on any given day, and a lot of them are carrying relief supplies."<sup>24</sup> Even with increased use of sealift noted earlier, getting airlift and deploying critical equipment will continue to be an issue. Once the airlift is underway, an essential part of the strategic airlift process is aerial refueling and the ability of the aircraft to survive.

#### **AERIAL REFUEL AND STRATEGIC LIFT--THE CHALLENGE**

Perhaps the most difficult aspect of Operation Allied Force was tanker support for transport aircraft delivering forces to the theater, and for combat aircraft conducting strike operations. Aerial-refueling missions were particularly demanding because tankers generally operate from bases on the edge of the theater. There were not enough air bases in the area around Kosovo to support all the aircraft committed to Operation Allied Force. Strike aircraft used bases closest to Kosovo, and longer-range tankers operated from locales farther away.<sup>25</sup>

Throughout the numerous missions performed in support of Kosovo, the Air Force employed more crews per tanker than normal. The Air Force met the large demand for aerial refueling by using reserve crews and drawing on active crews assigned to aircraft that were in depot for modifications. In general, the U.S. was able to meet the demands for tanker crews by using the forces normally planned for major theater wars. In addition to the amount of crews and aircraft available, two significant shortcomings in the planned use of airlift include:

- The inability of the U.S. to plan the use of the tanker fleet in theater, in real time.
- The current lack of emphasis on defensive electronic warfare measures to enhance the survivability of transport aircraft.<sup>26</sup>

The remedy for the first problem is relatively straightforward. Simply put, the U.S. tanker fleet needs training and upgrading in order to operate in a high-demand environment. It is no longer acceptable for tankers to be second-class citizens in the U.S. Air Force hierarchy. This resource needs to be manned and treated for what it is--critical.

The second problem--a lack of emphasis on defensive electronic warfare (EW) measures in the transport fleets is fixable, but it may prove costly. The alternative of losing transport aircraft to hostile air defense is unacceptable. The proliferation of shoulder-fired anti-aircraft missiles is likely to continue to the point where every member of selected enemy units may receive them. Slow moving aircraft deploying into territory occupied by such units invite attacks--which could disrupt or destroy the strategic deployment process. Imagine the results if LTC Embrey's plane was destroyed during its descent into Tirana--shown live on CNN. The U.S. and NATO should improve EW systems, flexibility, intelligence, and innovative approaches during future deployments.<sup>27</sup>

Once the U.S. has corrected the deficiencies in the strategic lift systems required to get to a theater, the throughput capacity of APODs or Sea Ports of Debarkation (SPODs) will still limit the courses of action available. Faced with an immature theater and poor port infrastructure, the U.S. must decide to either accept a slow deployment or build the infrastructure required to improve throughput capacity. The decision to build port infrastructure is complicated by another remnant of the cold war--the placement of construction engineer units in the reserves. In Somalia, Bosnia, and now Kosovo the U. S. has initially encountered a tough time in deployment because of poor port infrastructure and the absence of readily available construction engineers to correct problems.

## THROUGHPUT CAPACITY--A TOUGH TIME IN TIRANA.



FIGURE 1 GENERAL CONDITIONS AT TIRANA, APRIL 1999

PHOTO COURTESY OF U.S. ARMY EUROPE CORPS OF ENGINEERS

The days are long past—if such days ever existed—when expeditionary armies could land on foreign shores across the beach and support themselves during extended campaigns by pack train, horse drawn wagons and local foraging. Serious campaigning today requires a physical foundation of truly mega proportions, so much so that its presence or absence will determine not only whether campaigns are to be successful, but also indeed, whether they can be undertaken at all.

Martin Blumenson--Military author and analyst<sup>28</sup>

According to U.S. operational doctrine, logistics forces normally deploy to a theater under the protection of maneuver forces. Yet, on April 5<sup>th</sup> 1999, thirty-five U.S. Army logistics soldiers were among the first on the ground in Tirana. They were for the most part a platoon of petroleum specialists (77F). Their task was to link up with a U.S. Air Force Tactical Airlift Control Element (TALCE) and establish a camp next to Rinas airport in Tirana. The camp would eventually serve as distribution point for aid to the 200,000 plus Kosovo refugees already in Albania. This deployment occurred approximately four days before LTC Jim Embrey and his first platoon of infantry soldiers arrived. Interestingly, the petroleum platoon deployed in such a hurry that they somehow violated the cardinal rule of always deploy a forklift--first. "The airport on the outskirts of Tirana, is so badly run down and ill equipped that when the first relief supplies and military equipment arrived here more than two weeks ago, there was not one working forklift

truck available to help unload the aircraft that brought them.”<sup>29</sup> If U.S. deployment plans hinged on airlift, the absence of a forklift is virtually analogous to the proverbial “for the want of a nail...the kingdom was lost.” The petroleum platoon was therefore initially limited to moving cargo, tents, etc. by manual labor.

Thirty-five soldiers to build up an APOD? On the surface, it seems almost ludicrous. As a minimum APOD’s need: runway space, controlled access, storage areas, material handling equipment, aircraft controllers and equipment, housing, food and medical support. One conservative estimate allowed that it could take as many as five hundred soldiers (mostly construction engineers) to improve the Rinas airport in Tirana to the point where it could handle the thousands of short tons of humanitarian aid, ammunition, and supplies necessary to sustain the refugees, and TF Hawk.<sup>30</sup> TF Hawk consisted of 22 AH-64A Apache attack helicopters, 12 UH-60 Black Hawk utility helicopters, 20 CH-47 Chinook heavy lift helicopters, and a number of Kiowa scout helicopters. Jim Embrey and TF 1-6 were assigned to protect the APOD with a mix of M-1 Abrams tanks and M-2 Bradley fighting vehicles.

As the airlift into Albania continued, the U.S. Air Force eventually brought in security police and approximately three hundred and fifty aerial port specialists and aircraft mechanics to speed up the APOD development process. In the end, the number of service members working on building the APOD approached five hundred. A hasty analysis reveals that a U.S. Army construction engineer battalion could have performed the APOD development mission. Unfortunately, once the deployment began, Army planners ignored the shortfalls and problems Rinas presented and focused instead on seeking additional airlift to rapidly deploy.<sup>31</sup> At its peak, Rinas airport was handling more than 20 C-17 missions a day and transloading more than 11.5 short tons of materiel. After a seemingly endless time (for force projection), American willpower and ingenuity seemed to overcome even the layers of mud at Tirana and the APOD was established. “The first week at Tirana was rough on everyone, but by the second week they had erected a significant number of tents. By the third week, they had a big mess tent with two hot meals a day.”<sup>32</sup>

## CONCLUSIONS

This is the end of the last American war in Europe and we won it!

--Anonymous foreign policy expert, 10 June 1999

Was the deployment to Albania a good example of U.S. strategic velocity? Did the U.S. have to suffer the embarrassment of the TF Hawk deployment that took twice as long as anticipated? The answer to these questions is a resounding “no.” In fact, the answer to the force projection problem lies in improving joint logistics planning, expanding cooperation between services and allies, and embracing the holistic concept of strategic velocity as we estimate deployment requirements and timelines. Simply put, “getting there” really is half the battle, for both maneuver and sustainment forces—it is important to deploy the right force, at the right time, to accomplish the mission. The haphazard approach, shunning analysis for the sake of time, resulted in a petroleum platoon functioning as an APOD crew--without a forklift. As

the U.S. Army continues its transition from the forward basing of the cold war to the power projection required for the future, strategic velocity is a critical concept. In the twenty-first century, achieving true power projection requires U.S. forces to be deployed, throughput, and sustained significantly faster than before. In Operation Desert Storm (ODS), the U.S. Army took 205 days to deploy forces into theater. An analysis of the demands for the Kosovo deployment as well as the recent deployment to East Timor Indonesia indicate that we must move at least two and a half times faster than the ODS deployment.<sup>33</sup> The deployment to Kosovo would have taken twice as long as it did without the decision to move refugees out of Albania--thus freeing up aircraft to deploy inbound troops and equipment.

The essential challenge then is a shift in our way of thinking away from the mere speed of deployment focused on the use of airlift to the holistic concept of strategic velocity. Strategic velocity is simply a tool to help planners consider the total requirements necessary to deploy, as we seem to make a habit of underestimating this crucial requirement. Included in the concept of power projection is the idea that commanders of U.S. forces must reduce their appetite for redundant stocks of food (class I), Fuel (Class III), and Ammunition (Class V). Overstrained strategic lift assets cannot support the abundant legacies of previous conflicts. In fact, U. S. TRANSCOM freely admits that while the U.S. embraces a two Major Theater of War (MTW) strategy--our strategic lift is capable of supporting only one MTW at a time.

The key to success in any strategy appears to be an early allocation of lift assets, suitable to the power projection force, within the critical decision window for crisis intervention. In addition, getting the decision right makes all the difference whether or not the components of strategic velocity considered in this study: strategic lift, aerial refuel, and throughput capacity are enablers of strategy, or detriments. This absence of strategic lift, combined with the failure to embrace the concepts embodied in strategic velocity may in fact be the "Achilles Heel" of a force projection strategy. Lastly, the U.S. must develop true force projection experts who understand strategic velocity and can provide our warfighters with reality based deployment timelines. That picture must then be presented to our political leaders as the *cost of doing business* for future interventions.

#### **LESSONS AND RECOMMENDATIONS: WHAT CAN BE DONE?**

One of the most obvious ways to improve performance is by learning. Military organizations must inculcate in their members a relentless empiricism (and desire for change) if they are to succeed.

Eliot Cohen and Jon Gooch—Military Analysts<sup>34</sup>

The deployment of U.S. forces to Tirana occurred as it did in part because the leadership of the United States Army has not fully transitioned its thinking from a forward based force to power projection. The significant emotional event known as the Cold War is still shaping our thinking and behavior. We need not live in the past--in this paper I have offered three logistics lessons from Kosovo--components of strategic velocity that can help us visualize and achieve a power projection future. The lessons fall into three categories, Joint, Air Force, and Army.

**Lesson One: Deployment (Joint)**--The United States Air Force will need additional C-17's as the C-141's retire and C-5's continue to age. Increased emphasis on EW will be required to enhance survivability of large, slow aircraft. Given the requirement for rapid, decisive operations, "getting there" may now be more than half the battle. We must develop in our commanders, planners, and planning systems an appreciation of the limitations of deployment by air, and the capabilities of the new fleet of medium speed roll-on, roll off ships. These ships are the best answer for deploying heavy forces to a theater. The speed of these new RORO's make U.S. forces strategically responsive throughout most of the globe and extend the ranges of power projection.

**Lesson Two: Aerial Refuel and Survivability (Air Force)**-- The Kosovo operation was a tanker intensive conflict requiring over 160 tankers and 300 aircrews. In the aftermath of Kosovo, the U.S. Air Mobility Command is conducting a "Tanker Requirement Study" to explore alternatives to the tanker aircraft fleet size and crew ratio challenges.<sup>35</sup> This study may recommend the purchase of additional tanker aircraft. The presence of these strategic assets is critical for a nation that advertises the ability to project force anywhere in the world.

Ground based air defenses also pose a threat to deployment and refuel operations. In fact, as Kosovo continued, air mobility planners had to seek alternative routings around ground based Serbian air defense sites due to the lack of on-board EW defensive systems.<sup>36</sup> The U.S. must improve the EW capability of its deployment platforms in order to counter this threat. Any loss of aircraft in the deployment phase of an operation could have catastrophic effects on the conduct of a campaign.

**Lesson Three: Throughput Capacity (Joint):** The C-17 and the strategic airlift fleet did yeoman's work in deploying forces into the Kosovo theater. However, even the best airlift in the world cannot compensate for the absence of logistics infrastructure required for support operations. We learned this the hard way in Tirana primarily due to the heavy refugee support requirements placed on us. Flexibility is key during the deployment phase of the campaign. We must invest now in forces trained and capable of conducting port-opening operations. These forces will by necessity, contain a large number of construction engineers. Kosovo points out our current imbalance between the amount of construction engineering assigned to reserve components versus the active component. This shortfall in active U.S. Army force structure needs to be rectified now in order to prevent throughput problems like those at Tirana. Crisis intervention and force projection may not allow the time to activate critical construction engineer units. Finally, in an austere theater we should not throw together teams of loggiers and expect them to get the job done. We can do better--logistics units need to develop standard operating procedures and packages for port handling and port opening missions.

A recent edition of the National Guard Review dated February 2, 2000 features an interview with Secretary of the Army Louis Caldera. The magazine reporter asks: "Many people who look at this new plan want to attach a great deal of significance to the performance of Task Force Hawk as proof positive that the Army has to change. Is it correct to connect the Army's performance in Kosovo to the call for a lighter, more mobile Army?" In response to this question, Secretary Caldera said:

I do not think that there is a direct connection, but I do think that there is a useful metaphor in Task Force Hawk. It was a heroic effort to get that force in place, under the circumstances in which it had to move. However, fairly or unfairly, Task Force Hawk was seen by many people as an indication of the kinds of challenges the Army faces when trying to get its forces to the fight quickly. Further, I think some have drawn the conclusion that if you cannot get to the fight quickly, you are not relevant. And so, while I do not think it is correct to look at Task Force Hawk as a failure. It is, however, a useful metaphor for why the Army must change to stay relevant.<sup>37</sup>

The logistics difficulties encountered by the U. S. and its allies in Kosovo point out the limited flexibility of U.S. joint logistics operations. The slow deployment rates of the AH-64 Apache into Tirana are clearly unacceptable for future force deployments. When diverted from Macedonia, the austere runway conditions at Tirana severely limited the ability of U.S. to provide logistics support to deployed troops and refugees. This type of airfield limitation is a potential restriction that could distinguish future deployments into austere territories. Essentially, we remain mired in our Cold War era thinking of how to conduct and sustain an operation--with each service focused on its own needs. Educating and training planners to think jointly and in terms of strategic velocity will enable us to break this cold war paradigm.

While the definitive history of the U.S./NATO intervention in Kosovo is yet to be written, it is certain that if we fail to adapt based on this experience--then we are almost certain to endure some "military misfortune" in the future. Conversely, if the U.S. will direct sufficient attention to the issues highlighted in this paper, then it will at least have taken the initial steps toward gaining true strategic velocity. Once upon a time the U.S. Army's motto was "No More Task Force Smith's" perhaps we should as a nation take on the motto: "No More Tirana's." A nation with strategically relevant forces cannot afford to get it too badly wrong the next time. Jim Embrey and the soldiers of TF 1-6 are counting on us.

Word Count= 5,267



## GLOSSARY

I don't know what the hell this logistics is that Marshall is always talking about, but I want some of it.

Admiral King to a staff officer--1942<sup>38</sup>

It is important to begin by understanding that strategic velocity is a subset of strategic logistics. Interestingly, until 1944, Army dictionaries did not define the word logistics.<sup>39</sup> In the intervening years the word appeared in so many different forms, that even Encyclopedia Britannica has difficulty with a clear definition. Most of the military confusion about logistics stems from the inability of American doctrine to recognize that all of the nation's logistical systems are interdependent as they affect national security and support national goals and objectives. The Chairman of the Joint Chiefs of Staff has said that: "Logistics is the foundation of our combat power."<sup>40</sup> Joint publication 4.0--Doctrine for Logistics Support of Joint Operations defines logistics as: "The process of planning and executing the movement and sustainment of operating forces in the execution of military strategy and operations."<sup>41</sup>

To describe logistics action at all three levels, Joint publication 4.0 speaks of strategic, operational and tactical logistics but does not clearly define those levels--using instead the term "sustainment efforts." This only seems to add to the confusion surrounding the term. For the sake of clarity, this paper proposes the following definitions:

**Logistics:** The process of systems planning, management, and utilization of resources. Logistics includes functions such as storage, movement, distribution, maintenance, disposition, construction, operations, and services.

**Strategic Logistics:** The logistics process, which supports either the national strategy or military strategy.

**Strategic Velocity:** The ability of a force to project itself from the homeland or other strategic points to arrive at an operational theater ready to fight and sustain itself.<sup>42</sup> Strategic velocity is more than the speed of movement from point A to B. Instead, for the power projection of military forces, strategic velocity is a function of forces required, distance, strategic lift, aerial refuel capability, and port throughput capacity. The result of combining these seemingly disparate components under one concept is a synergy that will improve force projection planning and execution. A description of the variables is as follows:

**Force requirements** =Forces necessary to obtain the strategic objective.

**Distance of deployment** = Distance from strategic point of embarkation to employment of force.

**Strategic Lift** = Movement of forces or cargo by air or sea platform to Aerial Port of Debarkation (APOD) or Sea Port of Debarkation (SPOD).

**Refuel Capability** = Numbers of tanker aircraft required for aerial refuel operations.

**Throughput Capacity** = The ability of a port to receive personnel and cargo and move from reception and staging, into a prepared to fight position in a given period of time.



## ENDNOTES

<sup>1</sup> As quoted in Department of Defense, Doctrine for Logistics Support of Joint Operations, Joint Publication 4-0 (Fort Monroe, VA: Joint Warfighting Center/Doctrine Division, 27 January, 1995), IV-1.

<sup>2</sup> Linda Kozaryn, "Kosovo Deployment Hinges on Agreement" American Forces Information Network 20 March 1999; available from <<http://www.defenselink.mil>>; Internet; accessed 21 December 1999.

<sup>3</sup> LTC Jim Embrey, Commander Task Force 1-6 Infantry, telephone interview by author, 24 December 1999.

<sup>4</sup> "Time to Pull Together," Jane's Defense Weekly 12 May 1999, p. 1.

<sup>5</sup> William S. Cohen and Henry H. Shelton, Joint Statement on the Kosovo After Action Review, presented to the Senate Armed Services Committee, October 14, 1999, p. 1.

<sup>6</sup> Eliot Cohen and Jon Gooch, Military Misfortunes, The Anatomy of Failure in War. (New York: N.Y. The Free Press, 1990), p. 26.

<sup>7</sup> Charles E. Heller and William Stofft. America's First Battles, 1776-1965. (Lawrence, Kansas. University Press of Kansas, 1986) Heller and Stofft make the point that America is generally unprepared for the first battle of a conflict. Further, that it is our geographic isolation and industrial might as a nation that has allowed us to overcome our enemies.

<sup>8</sup> Cohen and Gooch, p.26.

<sup>9</sup> Ibid.

<sup>10</sup> Robert Osgood, Limited War Revisited (Boulder Colorado: Westview Press, 1979) p. 1.

<sup>11</sup> Ibid., 3

<sup>12</sup> Ibid.

<sup>13</sup> Ivo Daalder, "Unlearning the Lessons of Kosovo" Foreign Policy, Fall 1999. p. 130

<sup>14</sup> Robert H. Scales, "America's Army in Transition, Preparing for War in the Precision Age" Army Issue Paper No. 3, (1999). 23.

<sup>15</sup> Cohen and Shelton, 13.

<sup>16</sup> The ideas in this paragraph are based on remarks made by a speaker participating in the Commandant's Lecture Series.

<sup>17</sup> LTC Jim Embrey, Commander Task Force 1-6 Infantry, telephone interview by author, 24 December 1999 and 1 March 2000. In the second interview, Jim indicates that the decision to deploy to Tirana was recommended by a plans officer from USAREUR staff and approved by the deputy commander. The decision occurred so quickly that there was no time for any analysis of the throughput capacity of the Tirana APOD or plan developed to offset the obvious weaknesses of this underdeveloped area.

<sup>18</sup> Ibid.

<sup>19</sup> Embrey, Interview.

<sup>20</sup> As quoted in The Operational Art edited by B.J.C. McKercher and Michael Hennessy, Westport, CT, Praeger Publishers, 1996 p.37, 38

<sup>21</sup> The ideas in this paragraph are based on remarks made by a speaker participating in the Commandant's Lecture Series.

<sup>22</sup> Ibid.

<sup>23</sup> Steven Myers, Crisis in the Balkans: The overview, Apache Helicopters May Take Month to be Combat Ready," The New York Times, 10 April, 1999, sec., p.1

<sup>24</sup> Liz Sly, "A Lovely View, but, a Lousy Venue for a Ground War," Chicago Tribune, 18 May 1999, Sec. A, p.1.

<sup>25</sup> Cohen and Shelton, 16.

<sup>26</sup> "Implications of the Kosovo Crisis for Defense Planners." Forecast International. (Special Report) 1999, 9.

<sup>27</sup> Ibid.

<sup>28</sup> Martin Blumenson, "The Emergence of Infrastructure as a Decisive Strategic Concept," Parameters 4 (Winter 1999-2000): 45.

<sup>29</sup> Anthony DePalma, Crisis in the Balkans: At an Outdated Airstrip, NATO builds Up," The New York Times, 13 April 1999, sec. A, p.11.

<sup>30</sup> DePalma, p. 11.

<sup>31</sup> Embrey, Interview.

<sup>32</sup> Terry Joyce, "Charleston Based Crews Face Long Days," Charleston Post and Courier, 29 April 1999, p. 1.

<sup>33</sup> The ideas in this paragraph are based on remarks made by a speaker participating in the Commandant's Lecture Series

<sup>34</sup> Cohen and Gooch, p.233

<sup>35</sup> Tony Robertson, Congressional Testimony presented to the House Armed Services Readiness Subcommittee, 26 October 1999. Available from <<http://public.transcom.mil>>Internet; accessed 21 December 1999.

<sup>36</sup> "Implications of the Kosovo Crisis for Defense Planners." Forecast International. (Special Report) 1999, 9.

<sup>37</sup> "Interview with Secretary of the Army Louis Caldera" National Guard Review February 2, 2000.

<sup>38</sup> As quoted in Department of Defense, Doctrine for Logistics Support of Joint Operations, Joint Publication 4-0 (Fort Monroe, VA: Joint Warfighting Center/Doctrine Division, 27 January, 1995), I-6.

<sup>39</sup> Edward Lukert, Strategic Logistics, The Missing Link, (Carlisle: Strategic Studies Institute, U.S. Army War College, 77), 5.

<sup>40</sup> Department of Defense, Doctrine for Logistics Support of Joint Operations, Joint Publication 4-0 (Fort Monroe, VA: Joint Warfighting Center/Doctrine Division, 27 January, 1995), Introduction.

<sup>41</sup> *Ibid.*, v.

<sup>42</sup> Major General Robert H. Scales, termed the phrase "Strategic Velocity" in a discussion with the Advanced Strategic Arts program, 20, January 2000. It is clearly a concept that has evolved over time; beginning with discussions of strategic speed in his work, Future Warfare published in 1999. As used in this paper, the author has combined logistics concepts based on remarks made by two guest speakers participating in the Commandant's Lecture Series, with MG Scales ideas on "velocity" and his own thoughts on end to end force projection planning.



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